

CLAIMS

1. A radio frequency receiver for receiving supplementary data transmitted with a radio station signal, said supplementary data comprising one or more information word fields containing supplementary data transmitted with the radio station signal, said receiver comprising:
  - a host processor for processing said supplementary data;
  - a supplementary data demodulator and decoder for demodulating and decoding a received radio signal to generate a stream of bits representing one or more information word fields;
  - a information word type memory for storing one or more information word type fields;
- 5 detection circuitry arranged to receive and compare the information word type field decoded by the supplementary data decoder with one or more information word type fields stored in the information word type memory, and to provide a matched condition signal in response to a match between one or more decoded information word type fields and one or more of said corresponding stored information word types fields, and wherein the receiver is arranged to, in response to the matched condition signal, cause the corresponding supplementary data to be processed by means of the host processor.
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- 25 2. A receiver as claimed in claim 1, wherein the receiver and the supplementary data conform to RDS standard.
- 30 3. A receiver as claimed in claim 1, wherein the receiver and the supplementary data conform to RBDS standard.
4. A receiver as claimed in claim 1, wherein the receiver and the supplementary data conform to RDS standard information word type memory and wherein the receiver is arranged to store one or more

- Block 2 codes and the detection circuitry is arranged to provide the matched condition signal in response to a match between the one or more received decoded Block 2 information word type fields and one or more of said corresponding stored Block 2 information word types fields.
5. A receiver as claimed in claim 1, wherein the receiver and the supplementary data conform to RBDS standard information word type memory and wherein the receiver is arranged to store one or more 10 Block 2 codes and the detection circuitry is arranged to provide the matched condition signal in response to a match between the one or more received decoded Block 2 information word type fields and one or more of said corresponding stored Block 2 information word types fields.
15. A receiver as claimed in claim 1, wherein the information word type memory is arranged to store one or more GTC(s).
20. A receiver as claimed in claim 1, wherein the information word type memory is arranged to store one or more TP code(s).
25. A receiver as claimed in claim 1, wherein the information word type memory is arranged to store one or more PTY code(s).
30. A receiver as claimed in claim 1, wherein the information word type memory is programmable.
11. A receiver as claimed in claim 1, wherein the information word type memory is user-programmable.

12. A receiver as claimed in claim 1, wherein the receiver is arranged to process the supplementary data using the host processor during an already non-idle period of the host processor.
  - 5 13. A receiver as claimed in claim 1, wherein the receiver is arranged to process the supplementary data using the host processor during an already non-idle period of the host processor, and wherein the non-idle period is a period when the host processor is processing GSM data.
  - 10 14. A receiver as claimed in claim 1, wherein the receiver is arranged to process the supplementary data using the host processor during an already non-idle period of the host processor, and wherein the non-idle period is a period when the host processor is processing TDMA data.
  - 15 15. A receiver as claimed in claim 1, wherein the receiver is arranged to process the supplementary data using the host processor during an already non-idle period of the host processor, and wherein the non-idle period is a period when the host processor is processing WCDMA data.
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16. A receiver as claimed in claim 1, further comprising:
    - a buffer memory for storing the decoded supplementary data prior to the decoded supplementary being processed by the host processor.
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17. A receiver as claimed in claim 16, wherein said buffer memory is a FIFO memory.
  18. A receiver as claimed in claim 16 or 17, further comprising a latch responsive to the detection circuitry for controlling the flow of supplementary data to the buffer memory.
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19. A receiver as claimed in claim 18, wherein said latch is arranged to receive at a data input the decoded supplementary data, and at a clock input a match condition signal generated by the detection circuitry responsive to a match.  
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20. A receiver as claimed claim 16, wherein the receiver is arranged such that the host processor reads the contents of the buffer memory upon receipt of an interrupt.
- 10 21. A receiver as claimed in claim 20, wherein the interrupt is generated by circuitry external to the receiver.
22. A receiver as claimed in claim 20, wherein the interrupt is initiated by the user.  
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23. A receiver as claimed in claim 20, wherein the interrupt is generated in response to the buffer memory reaching its capacity.
- 20 24. A receiver as claimed in claim 20, wherein the interrupt is generated in response to an instruction to process GSM burst data.
- 25 25. A receiver as claimed in any one of claims 16, wherein the receiver is arranged such that the host processor reads the contents of the buffer memory during GSM burst activity.
26. A receiver as claimed in claim 25, wherein said receiver is incorporated into a device for communicating over a GSM network.  
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27. A receiver as claimed in claim 26, wherein said device for communicating over a GSM network is a mobile phone.
28. A receiver as claimed in claim 1, wherein the receiver is arranged to be capable of receiving and decoding the radio station signal.

29. A receiver as claimed in claim 1, wherein the radio station signal is an audio signal and the receiver is arranged to be capable of presenting the audio signal to a user.  
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30. A receiver as claimed in claim 1, wherein the radio station signal is a frequency modulated signal.
31. A receiver as claimed in claim 1, wherein the radio station signal is an amplitude modulated signal.  
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32. A mobile terminal comprising a receiver as claimed in claim 1.
33. A method for receiving supplementary data transmitted with a radio station signal, said supplementary data comprising one or more information word fields containing supplementary data transmitted with the radio station signal, said method comprising:  
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processing said supplementary data by a processing means;  
demodulating and decoding a received radio signal to generate a stream of bits representing the one or more information word fields;  
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storing one or more information word type fields in an information word field store;  
receiving and comparing the information word type field decoded by  
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the decoder with one or more of the stored information word type fields, and in response to a match therebetween, causing the corresponding supplementary data to be processed by group to be processed.
34. A receiver as hereinbefore described with reference to Figures 5 and 6.  
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35. A method of processing supplementary data as hereinbefore described with reference to Figures 5 and 6.